We claim:

1. A method for rendering, comprising:

defining a rendering request, the rendering request describing an object to be rendered;

querying a progressive cache to determine a cached element most representing a display image satisfying the rendering request;

sending the cached element to a starting stage of a rendering pipeline for the object, the starting stage associated with the cached element; and

sending an output of the starting stage to an input of a next stage of the rendering pipeline, a final stage of the rendering pipeline determining the display image satisfying the rendering request.

2. The method of claim 1 wherein an output of a stage of the rendering pipeline is sent to the progressive cache.

3. The method of claim 1 wherein the progressive cache comprises a set of caches.

4. The method of claim 3 wherein a particular cache in the set of caches is a preprocessed shape descriptor cache.

5. The method of claim 3 wherein a particular cache in the set of caches is a distance field cache.

6. The method of claim 3 wherein a particular cache in the set of caches is a distance values cache.

7. The method of claim 3 wherein a particular cache in the set of caches is an antialiased intensities cache.

8. The method of claim 3 wherein a particular cache in the set of caches is a colorized image cache.

9. The method of claim 6 wherein distance values for a component of a pixel of the display image are stored in the distance values cache.

10. The method of claim 9 wherein the distance values for the component of the pixel of the display image are combined prior to determining an antialiased intensity for the component of the pixel.

11. The method of claim 3 wherein data stored in a particular cache in the set of caches is compressed.

12. The method of claim 1 wherein the progressive cache finds a cache element using hashing.

13. The method of claim 3 wherein the progressive cache eliminates least recently used cached elements from a particular cache in the set of caches when the particular cache is full.

14. The method of claim 1 wherein the rendering pipeline comprises a sequence of stages.

15. The method of claim 14 wherein a particular stage in the sequence of stages processes the rendering request.

16. The method of claim 14 wherein a particular stage in the sequence of stages determines a preprocessed shape descriptor.

17. The method of claim 14 wherein a particular stage in the sequence of stages determines a distance field.

18. The method of claim 14 wherein a particular stage in the sequence of stages determines distance values.

19. The method of claim 14 wherein a particular stage in the sequence of stages determines antialiased intensities.

20. The method of claim 14 wherein a particular stage in the sequence of stages determines a colorized image.

21. The method of claim 1 wherein the starting stage associated with the cached element is a next stage of a corresponding stage of a cache of the progressive cache containing the cached element.

22. An apparatus for rendering, comprising:

means for querying a progressive cache to determine a cached element most representing a display image satisfying a rendering request for an object;

means for sending the cached element to a starting stage of a rendering pipeline for the object, the starting stage associated with the cached element; and

means for sending an output of the starting stage to an input of a next stage of the rendering pipeline, a final stage of the rendering pipeline determining the display image satisfying the rendering request.

23. A system for rendering, comprising:

a rendering pipeline including a plurality of stages connected serially to each other so that output of a previous stage provides input to a next stage, and a first stage is configured to receive a rendering request for an object, and a last stage is configured to produce a display image corresponding to the object;

a progressive cache including a plurality of caches arranged to store cached elements in a least finished to a most finished order; and

a cache controller configured to route a most finished cached element from the progressive cache to a next stage of a corresponding stage of the rendering pipeline and the output of a stage of the rendering pipeline to a corresponding cache of the progressive cache.